

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
AIR QUALITY TECHNICAL ADVISORY COMMITTEE MEETING

Thursday, March 1, 2007
MAG Office
Phoenix, Arizona

MEMBERS PRESENT

Stephen Cleveland, City of Goodyear, Chairman
Jess Segovia, Avondale
#Michael Salisbury for Lucky Roberts, Buckeye
Jim Weiss, Chandler
#Jamie McCullough, El Mirage
Lisa Taraborelli for Tami Ryall, Gilbert
Doug Kukino, Glendale
Scott Bouchie, Mesa
Gaye Knight, Phoenix
Larry Person, Scottsdale
Antonio DeLaCruz, Surprise
Oddvar Tveit, Tempe
Larry Crisafulli for Walter Bouchard, Citizen
Representative
#Corey Woods, American Lung Association of Arizona
Barbara Sprungl, Salt River Project
Brian O'Donnell, Southwest Gas Corporation
Mark Hajduk, Arizona Public Service
Company
#Gina Grey, Western States Petroleum Association
*Randi Alcott, Valley Metro
Dave Berry, Arizona Motor Transport Association
Jeannette Fish, Maricopa County Farm Bureau
Russell Bowers, Arizona Rock Products Association
*Michelle Rill, Greater Phoenix Chamber of Commerce

Amanda McGennis, Associated General
Contractors
Spencer Kamps for Connie Wilhelm-Garcia,
Homebuilders Association of Central Arizona
*Stephen J. Andros, American Institute of
Architects - Central Arizona
Mannie Carpenter, Valley Forward
Kai Umeda for Patrick Clay, University of Arizona
Cooperative Extension
Beverly Chenausky, Arizona Department of
Transportation
Peter Hyde, Arizona Department of Environmental
Quality
#Wienke Tax, Environmental Protection Agency
Jo Crumbaker, Maricopa County Air Quality
Department
Duane Yantorno, Arizona Department of Weights
and Measures
Ed Stillings, Federal Highway Administration
*Judi Nelson, Arizona State University
#Angela Cruz for B. Bobby Ramirez, Salt River
Pima-Maricopa Indian Community
*David Rueckert, Citizen Representative

*Members neither present nor represented by proxy.
#Participated via telephone conference call.
+Participated via video conference call.

OTHERS PRESENT

Lindy Bauer, Maricopa Association of Governments
Cathy Arthur, Maricopa Association of Governments
Taejoo Shin, Maricopa Association of Governments
Dean Giles, Maricopa Association of Governments
Julie Hoffman, Maricopa Association of Governments
Patrisia Navarro, Maricopa Association of Governments
Kelly Taft, Maricopa Association of Governments
Matt Clark, Maricopa Association of Governments
Diane Arnst, Arizona Department of Environmental
Quality
David Lillie, Arizona Department of Environmental
Quality
Ira Domskey, Arizona Department of Environmental
Quality
Don Gabrielson, Pinal County Air Quality
Scott Di Biase, Pinal County Air Quality
Robert St. John, City of Glendale
Michelle Lehman, City of Surprise
Shane Kiesow, City of Apache Junction
Bob Downing, Maricopa County Air Quality
Department
Dena Konopka, Maricopa County Air Quality
Department
Johanna Kuspert, Maricopa County Air Quality
Department

Corinne Purtill, Arizona Republic
Steve Egge, J&D Excavators
Merry Ellen Boom, Converse Consultants
Cameron Flower, Kitchell Contractors of
Arizona
Greg Shively, Kitchell Contractors of Arizona
Mike Hudson, Eagle Distributing, Inc.
Kristine Stoddard, Arizona House of
Representative
Tami Stowe, Arizona House of Representatives
Brent Stoddard, City of Glendale
Brad Lundahl, City of Scottsdale
James Wilson, E.H. Pechan & Associates, Inc.
Ben Dowler, Engle Homes
Alisa Schroder, Meritage Homes
Jane McVay, Arizona Department of
Transportation
Andrea Martin, Arizona Department of
Agriculture
Bert Acken, Lewis and Roca
#Bob Dulla, Sierra Research
#Colleen McKaughan, Environmental Protection
Agency
#Joy Herr-Cardillo, Arizona Center for Law in
the Public Interest

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on March 1, 2007. Stephen Cleveland, City of Goodyear, Chair, called the meeting to order at approximately 1:40 p.m. Michael Salisbury, Town of Buckeye; Jamie McCullough, City of El Mirage; Corey Woods, American Lung Association of Arizona; Angela Cruz, Salt River Pima-Maricopa Indian Community; Gina Grey, Western States Petroleum Association; Wienke Tax, Environmental Protection Agency; Colleen McKaughan, Environmental Protection Agency; Bob Dulla, Sierra Research; and Joy Herr-Cardillo, Arizona Center for Law in the Public Interest, attended the meeting via telephone conference call.

2. Call to the Audience

Mr. Cleveland stated that, according to the MAG public comment process, members of the audience who wish to speak are requested to fill out comment cards, which are available on the table adjacent to the doorway inside the meeting room. Citizens are asked not to exceed a three minute time period for their comments. Public comment is provided at the beginning of the meeting for nonagenda items and nonaction agenda items. Mr. Cleveland noted that no public comment cards had been received.

3. Approval of the February 15, 2007 Meeting Minutes

The Committee reviewed the minutes from the February 15, 2007 meeting. Scott Bouchie, City of Mesa, moved and Antonio DeLaCruz, City of Surprise, seconded and the motion to approve the February 15, 2007 meeting minutes carried unanimously.

4. Update on the Maricopa County 2005 PM-10 Emissions Inventory

Jo Crumbaker, Maricopa County Air Quality Department, provided an update on the Maricopa County 2005 PM-10 Emissions Inventory. She indicated that comments have been received in approximately 40 areas and the Maricopa County Air Quality Department is in the process of evaluating the comments. Ms. Crumbaker stated that there are no new revisions at this time and the Committee will be notified when the process is complete.

James Wilson, E.H. Pechan & Associates, discussed comments submitted on the draft 2005 inventory by the Home Builders and Associated General Contractors. He discussed the experience of E.H. Pechan & Associates and indicated that the comments focused on construction activity, windblown dust, paved road dust, and unpaved road dust.

Mr. Wilson stated that concerns about construction activity in the draft 2005 inventory were in the areas of site preparation/land development, the road construction emission factor, and the rule effectiveness study. He provided a picture of an active construction site and discussed site preparation/land development in the draft 2005 inventory. Mr. Wilson mentioned a mathematical issue and stated that the computation information was provided to Maricopa County which would lower construction activity PM-10 estimates by 2,100 tons per year. He discussed road construction in the draft 2005 inventory and indicated that a key issue is the PM-10 emission factor selection. The inventory applies a worst case emission factor to all road construction. Mr. Wilson mentioned how the South Coast Air Quality Management District reviewed road construction projects and recommended using their methods, which would reduce PM-10 to 5,281 tons from 11,831 tons.

Mr. Wilson discussed the rule effectiveness study and mentioned changes in EPA guidance. He stated that there are now rule effectiveness ranges and associated importance factors. Mr. Wilson discussed the Maricopa County rule effectiveness study. He stated that when there was an emissions related Notice of Violation (NOV) or Notice to Correct (NTC), it was assumed the entire site was uncontrolled. Those results were used to compute a rule effectiveness value of 49 percent. Mr. Wilson mentioned the history of the rule effectiveness concept. He stated that it does not make sense to apply 49 percent rule effectiveness to the entire construction site.

Mr. Wilson discussed two alternate methods for rule effectiveness study data analysis: tie NOVs and NTCs to activity types in the emission estimation methods and evaluate the occurrence of rule-specific NOVs/NTCs. He mentioned that when looking at nine project types for the first method, the controlled PM-10 estimates went from 35,181 tons to 10,059 tons. When applying the second method, the overall compliance rate was 87 percent versus the Maricopa County compliance rate of 49 percent. He stated that it is best to match the compliance rate of rule effectiveness with emission generating activity.

Mr. Wilson mentioned concerns with the windblown dust PM-10 emissions in the draft 2005 inventory. He discussed the need for average or typical year emissions, the suitability of the ENVIRON Model, issues with 2005 emission estimates, and reasonable checks. Mr. Wilson stated that the ENVIRON Model does not estimate emissions for any wind speeds below 20 miles per hour. He stated that 83 percent of the wind events were used to calculate emissions in Yuma County. Mr. Wilson noted that measures where activity would occur at 15 miles per hour wind speeds would not be able to be tied back to the draft 2005 inventory. He discussed PM-10 emissions from agriculture, grassland, shrubland, and barren lands in the PM-10 nonattainment area.

Mr. Wilson discussed the paved road emissions in the draft 2005 inventory. He mentioned the importance of including new silt loading measurements. Mr. Wilson expressed concern with the emission factor application for PM-2.5. He stated that the use of 0.15 multiplier is incorrect and that it should be recalculated using AP-42 equation with PM-2.5-specific particle size multiplier and correction factor. He discussed the unpaved road emissions in the draft 2005 inventory. He mentioned key variables and focused on verifying the estimates of average daily traffic by category and unpaved road mileages. Mr. Wilson stated that research has been conducted in Clark County (Las Vegas, Nevada) with aerial photos. He indicated that these changes would provide for a more accurate inventory and good foundation for evaluating measures.

Gaye Knight, City of Phoenix, asked if the recommendations would change the total estimated emissions in the draft 2005 inventory. Mr. Wilson responded that the total emissions could increase or decrease. He stated that it is important to get the right balance among the contributing source categories.

Doug Kukino, City of Glendale, asked if the analysis looked at the entire draft 2005 inventory. Mr. Wilson replied that he selected the source categories that had the highest emission estimates or had significant changes since the 2002 emissions inventory. He indicated that the source categories he analyzed had 10,000 tons per year of actual or potential emissions in 2002 or 2005.

Dave Berry, Arizona Motor Transport Association, inquired about the total emissions in the draft 2005 inventory. Ms. Crumbaker replied approximately 91,000 tons. Mr. Berry commented on potential emission reductions mentioned in the presentation based on different methodologies. He

inquired about the importance of making these changes and have a peer review of the draft inventories. Mr. Wilson responded that it is important for the inventory to have a firm foundation.

Peter Hyde, Arizona Department of Environmental Quality, commented that windblown dust emissions in the 2002 inventory were 5,000 tons per year and are 1,000 tons per year in the draft 2005 inventory. He stated that a number of the measures being considered would have substantial reductions in the windblown dust source category. Mr. Hyde indicated that he is also concerned about the 20 mile per hour wind speed threshold and using meteorological data from three meters. He stated that ten meters should be used. Mr. Hyde commented on looking at more than one year of emissions. He expressed the importance of windblown emissions in the inventory. Mr. Hyde indicated that even if the windblown dust portion of the draft 2005 inventory increases there would still be a lot of room to make the reductions necessary.

Mr. Berry inquired about the next steps for the draft 2005 inventory. Ms. Crumbaker responded that Maricopa County is currently evaluating the comments and revising the draft 2005 inventory. She stated that a summary of the comments received and responses will be included in the final inventory. Ms. Crumbaker added that Maricopa County will also provide a list of the changes made between the draft and final document. Mr. Berry inquired about when the final 2005 inventory would be available. Ms. Crumbaker replied that a series of work still needs to be completed and the hope is to have it available by the end of March.

Mr. Berry stated that the Committee has to assume that information on the control measures is a work-in-progress and may change based on changes to the draft 2005 inventory. Lindy Bauer, Maricopa Association of Governments, indicated that the percentages of the total emissions for the source categories may change; however, the contributing sources themselves are not likely to change. She added that there are preliminary draft measures for all the sources in the draft 2005 inventory.

Cathy Arthur, Maricopa Association of Governments, addressed the concerns raised in the presentation about the paved road and unpaved road source categories in the draft 2005 inventory. She indicated that MAG contributed to these sections of the inventory. Ms. Arthur indicated that the PM-2.5 multiplier of 0.15 was for fugitive dust, which is the recommended WRAP value to apply to the PM-10 emissions for fugitive dust. Ms. Arthur stated that AP-42 was used to calculate PM-2.5 exhaust emissions and a table indicating that is included in the draft 2005 inventory. Ms. Arthur referred to comments about no precipitation being used in the formula. She stated that 36 days of precipitation was assumed in the formula.

Ms. Arthur referred to comments on the unpaved roads category. She stated that it is true that the unpaved roads category of the draft 2005 inventory is based on the Serious Area Plan for PM-10 and that MAG is looking into updating that data. Ms. Arthur mentioned using GIS and aerial photos to determine mileage. She indicated that MAG may do additional traffic counts on unpaved roads. Ms. Arthur stated that in Clark County, the unpaved roads inventory is one-sixth the size of that in Maricopa County. In addition, the Clark County area is only one-sixth the size of the Maricopa County PM-10 nonattainment area. Ms. Arthur noted that emissions from unpaved roads in Clark County are approximately 10 percent of their total inventory and are about nine percent in the Maricopa County draft 2005 inventory.

Spencer Kamps, Homebuilders Association of Central Arizona, inquired about Maricopa County having six times the amount of unpaved roads than Clark County. Ms. Arthur replied that the unpaved road emissions in Clark County are 10 percent of their overall emissions. Unpaved roads

are nine percent of the overall emissions in the Maricopa County draft 2005 inventory. Mr. Kamps asked about the comparable tonnage. Ms. Arthur responded that she did not know what Clark County's tonnage was. Mr. Kamps commented that it stands to reason that the emissions from unpaved roads would be six times greater than those in Clark County.

Mr. Kamps stated that he is extremely cautious of recommending measures using an inventory that is not complete. Mr. Kamps commented on not meeting the PM-10 standard and indicated that there is one chance to get this right, otherwise the Committee will be back next year to do it again. He stated that it is unknown if the region will meet the five percent requirement with the measures being discussed based on the draft 2005 inventory. Ms. Arthur stated that the draft 2005 inventory may change, but the benefits of increasing compliance by one percent have been provided. This will minimize the impact of changes in the inventory on control measure benefits.

Mr. Kamps expressed concern with being asked to recommend measures when it is unknown if they are valid, cost effective, or result in five percent reductions, since the inventory is not complete. Ms. Arthur replied that the PM-10 standard has not been attained because there are no silver bullets, which is why every source category needs to be addressed. She indicated that Sierra Research has calculated the cost effectiveness for 46 measures and the marginal benefit for each measure has been provided. Ms. Arthur commented on bundling some of the measures for synergism to allow for meeting the five percent reductions and showing attainment through the modeling and at the monitors.

Mr. Kamps commented on having control measures for each source category and working with the information available. He indicated that the PM-10 standard has not been met with this strategy in the past. Mr. Kamps suggested using a comprehensive approach to reach attainment versus a shotgun approach. He indicated that nobody can leave the meeting without being confident in the Five Percent Plan for PM-10. Mr. Kamps stated that he is not confident in looking at the measures since he is not confident with the draft 2005 inventory.

Ms. Knight stated that she shared concern with Mr. Kamps that the inventory should be correct. She indicated that the Committee needs to move forward and recognize that the draft 2005 inventory may change. Ms. Knight mentioned that if the inventory changes the implementing agency can justify why they are not planning to adopt a particular measure. Mr. Cleveland stated that by the time the measures are given to the implementing agencies for consideration, the 2005 inventory should be finalized. He indicated that the Committee needs to determine which measures should be recommended.

5. Suggested List of Measures to Reduce PM-10 Particulate Matter

Ms. Bauer stated that the Committee has been reviewing a Preliminary Draft Comprehensive List of Measures to reduce PM-10 Particulate Matter. The Committee has also reviewed the preliminary draft 2005 emissions inventory prepared by Maricopa County, preliminary draft projected emissions for 2007, 2008, and 2009 prepared by MAG, air quality monitoring data, the modeling approach for the Five Percent Plan for PM-10, preliminary results from the PM-10 Source Attribution and Deposition Study, and descriptive information generated for the measures, including cost effectiveness. In addition, MAG conducted a workshop on February 16, 2007 on the preliminary draft measures and PM-10 Source Attribution and Deposition Study.

Ms. Bauer indicated that the Committee is requested to recommend a Suggested List of Measures to Reduce PM-10 Particulate Matter to the MAG Management Committee. On March 14, 2007, the MAG Management Committee may make a recommendation to the MAG Regional Council. On March 28, 2007, the MAG Regional Council may take action to approve the Suggested List of Measures for consideration by the State and local governments for implementation. Ms. Bauer stated that the Five Percent Plan for PM-10 will be composed of the measures where firm commitments to implement have been received.

Ms. Bauer mentioned the key guiding principles for the Five Percent Plan for PM-10. She indicated that there is no one silver bullet to solve the PM-10 particulate pollution problem. Ms. Bauer stated that a large number of measures will be needed to meet the federal requirements for this plan. She mentioned that five percent reduction in PM-10 emissions per year will be needed until the standard is met, which is estimated to be 4,600 tons per year. This figure is a 2007 projection, based upon the Draft Maricopa County 2005 Periodic Emissions Inventory for PM-10, dated January 23, 2007 and is subject to change. This reduction will be needed in 2008 and another reduction of 4,600 tons will be needed in 2009. If violations at the monitors occur in 2007, another reduction of 4,600 tons will be needed in 2010. Ms. Bauer mentioned modeling attainment at the West 43rd Avenue, Durango, and Higley monitors during both stagnant and high wind conditions. Actual attainment will be needed at all of the monitors, three years of clean data as measured by the monitors throughout the nonattainment area - 2007, 2008, and 2009. She mentioned Contingency Measures beyond the above. The Contingency Measures will need to be sufficient to reduce emissions equivalent to one year of Reasonable Further Progress toward attaining the standard. Ms. Bauer stated that plan measures are required to be applied to all similar sources throughout the nonattainment area.

Ms. Arthur stated that revised tables 1-3 have been provided at each place. She referred to Table 1 and indicated that the cost effectiveness for measure 14 has changed to \$320,444 per ton. In addition, the cost effectiveness for measure 29 has changed to \$4 per ton. As a result the rankings have changed slightly. Table 2 shows that measure 29 is now ranked number one. Ms. Arthur stated that Table 3 has changed to define the unit that was used to develop the ton reduction. She indicated that in many cases the computation of ton reduction is based on a one percent increase in compliance. Mr. Hyde asked if the estimated impact on five percent emissions reductions in Table 3 total the 4,594 target. Ms. Arthur replied that the estimates are not additive because more than one percent increase in compliance could be achieved with some measures.

Colleen McKaughan, Environmental Protection Agency, inquired about how the additional compliance was calculated. Ms. Arthur responded that she used the compliance rate in the draft 2005 inventory, assuming that 80 percent would be the maximum, and assuming the impact based on the tons that are associated with that source category, the tons reduced for every one percent increase between the current rule compliance and 80 percent compliance can be calculated. Ms. McKaughan expressed some concern with the calculation.

Mr. Berry asked if someone will be tabulating as the measures are selected to make sure the approximately 4,500 tons of PM-10 needed for the five percent reductions are achieved. Ms. Arthur commented on the challenge of determining the increase in compliance. She indicated that may need to be completed offline and brought back to the Committee. Mr. Cleveland stated that not everyone will adopt the same measures. Mr. Berry commented on multiplying the increase in compliance by the number of tons in Table 3. He mentioned that having those issued an NOV or NTC sign a pledge

may result in a high level of compliance. Ms. Arthur responded that EPA specifies an 80 percent maximum compliance rate. Mr. Berry mentioned that the big lever may be increasing compliance with the existing rules and not changing the rules. Ms. Arthur replied that there are other source categories where new measures would be helpful. Mr. Berry stated that if everyone would follow the existing rules, many of the measures might not be needed. Ms. Arthur indicated that a package of measures for Rule 310 could result in as much as a 31 percent increase in compliance, assuming the base compliance rate of 49 percent from the 2005 inventory remains the same.

Brian O'Donnell, Southwest Gas Corporation, suggested just looking at the measures the Committee is not comfortable with and recommending the measures that have no issues. Mr. Cleveland suggested looking at each category and identify those the Committee wishes to discuss. Mr. Kamps asked if the Committee would be voting on the measures at the meeting. Mr. Cleveland replied that is correct. Mr. Kamps mentioned the discussion on rule effectiveness. He stated that increasing rule effectiveness decreases the tons that can be reduced. Mr. Kamps indicated that when taking the NOVs and NTCs against every inspection in 2005 their compliance rate is 74 percent. He stated that if we are wrong and try to increase rule effectiveness, no benefit will be achieved. Mr. Cleveland commented on the Committee recommending a Suggested List of Measures and by the end of March, the 2005 emissions inventory will be finalized.

Mr. Kamps commented on the Committee making decisions without good information. Ms. Arthur stated that if the compliance rate is changed to 74 percent, a six percent increase in compliance can still be achieved. Mr. Kamps asked if the tonnage would change. Ms. Arthur responded yes; however, there are many measures affecting areas other than construction. Mr. Kamps stated that all the information needs to be accurate to make sure the five percent reductions are achieved. Mr. Cleveland indicated that the commitments will be modeled to determine if five percent reductions would be achieved. He mentioned that each implementing agency may have different reasons as to why they will or will not implement certain measures.

Mr. Hyde asked if the Committee can stipulate that any results of the voting on the measures are preliminary and are likely to be revised with the advent of the 2005 PM-10 emissions inventory. Ms. Bauer replied that the voting can be qualified to say that based upon the data available at this time, this is the preliminary recommendation of the Committee and is subject to change. She added that the commitments are what count toward the adopted Five Percent Plan for PM-10. She stated the assumptions for the commitments are developed and then the final modeling is conducted. Ms. Bauer indicated that if there had been a higher compliance rate with the existing rules, a five percent plan may not have been necessary. Mr. Cleveland indicated that voting at this meeting are preliminary actions and the Committee can further refine them in the future.

Russell Bowers, Arizona Rock Products Association, asked if the additional measures being evaluated will be included in the future. Mr. Cleveland replied that the hope is to also vote on the additional measures in Table 4 at this meeting.

Corey Woods, American Lung Association of Arizona, inquired about voting for those on telephone conference call. Mr. Cleveland replied that he will request their votes. Gina Grey, Western States Petroleum Association, asked if there is a vote on the entire package of measures. Mr. Cleveland responded that the Committee will go through by category. Lisa Taraborelli, Town of Gilbert, stated that if the Committee is recording their votes then those on the phone should do the same. Ms. McKaughan inquired about the voting status of EPA on the Committee. Ms. Bauer responded that EPA is a voting member of the Committee. Ms. McKaughan stated that EPA has veto power on the

Five Percent Plan for PM-10 and stated that EPA will abstain from voting on the measures due to a conflict of interest.

Mr. Cleveland mentioned the preliminary draft measures for the Fugitive Dust Control Rules. Jeannette Fish, Maricopa County Farm Bureau, suggested removing preliminary draft measure seven. She stated that increasing fines for dust control violations and continuing to publish the list of violators show negligible benefits. Mr. Cleveland suggested identifying the measures the Committee wants to discuss.

Amanda McGennis, Associated General Contractors, asked for clarification on preliminary draft measure six, strengthen the stringency and enforcement of the trackout provisions. She asked if it addresses permitted or nonpermitted sources. Ms. Arthur responded that Table 1 provides descriptions of the measures. Mr. Cleveland stated that Table 4 lists the additional measures. Ms. Arthur indicated that measure six would be implemented on those who are currently covered by trackout provisions in Rule 310. Ms. Fish asked if Rule 310 applies to anyone who pulls onto the highway. Ms. Crumbaker responded permitted sources. Ms. Bauer mentioned that it is important to enforce trackout on nonpermitted and permitted sources. She mentioned regulated sources that do not have permits. Ms. Bauer indicated that she thought the intent of the measure was to enforce trackout provisions on all sources. Ms. Arthur asked if there are any trackout provisions other than in Rule 310. Ms. Crumbaker replied that there is a trackout provision in Rule 316.

Mr. O'Donnell asked why the Committee is considering the preliminary draft measures that have negligible impacts. Mr. Bowers indicated that measures that appear negligible today, may not be, once the information is finalized. Mr. Cleveland stated that the Committee has requested discussion on measures six and seven. He asked if there are any other measures the Committee wishes to discuss in the Fugitive Dust Control Rules category. Mr. Kamps indicated that in addition to those mentioned, he has issues with measures four and 10-17. Barbara Sprungl, Salt River Project, indicated that she has a comment on measure three.

Mr. Hyde suggested removing all measures in Table 2 that have a cost effectiveness of more than \$120,000 per ton and also remove all the measures on page 2 of Table 2 except for just-in-time grading and shifting hours of operation. He commented on the cost effectiveness being \$2.5 million per ton for measure six. Ms. Arthur responded that the cost effectiveness for measure six is high because it assumes more frequent sweeping of access points based on the trackout observed. She stated that there are other alternatives to sweeping which would change the cost effectiveness. Ms. Arthur indicated that the measure does have benefits and that cost effectiveness should not be the only factor considered.

Mr. Cleveland asked if there are any comments on measures 1, 2, 5, 8, 9, and 18. No comments were noted. Mr. Cleveland asked for comments on measure three, core dust control training program with video provided to local governments and private sector. Ms. Sprungl indicated that Maricopa County already has a video about effective dust control and overview of Rule 310 dated November 2001. She inquired about the additional control from updating the video. Ms. Sprungl stated that she did not think the measure would achieve a cost effectiveness greater than that for measure two. She suggested merging measures two and three and specify that the video would be updated since one already exists. Ms. Crumbaker stated that there is an updated video. She indicated that the video is one of the supplemental environmental penalty projects.

Mr. Cleveland asked if the intent is to have the video be part of an effective training program. Ms. Arthur replied that the intent was also to provide a package that local governments could use to train their staff. Ms. Crumbaker stated that it is her understanding that the intent is to combine and package the materials that have been prepared. Mr. Cleveland indicated that measures two and three are being merged.

Mr. Cleveland asked for comments on measure four, dust managers required at construction sites of 50 acres and greater (e.g., Clark County). Mr. Kamps commented that they looked at over 44,000 inspections in 2005. He stated that comparing the NOV's and NTC's to the inspections results in a compliance rate of 74 percent. Mr. Kamps commented on the compliance rate in the draft 2005 inventory and the measures being considered for construction. He indicated that construction as it relates to residential development is approximately 4,000 tons, slightly more than agriculture. However, construction is bearing the cost of the measures. Mr. Kamps stated that he feels construction is doing more than their fair share and the benefits are negligible.

Mr. Cleveland asked if the analysis looked at the acreage on the sites with NOV's. Mr. Kamps replied that according to Rule 310, 1,000 acres could be stabilized and if an all-terrain vehicle drives over 10 square feet of the site, the entire site is not in compliance. He indicated that they have been accused by Maricopa County of taking their inspectors. Mr. Kamps stated that there are officers that have been hired, but they do not sit on each site because it is cost prohibitive.

Mr. O'Donnell asked if measure four would require one dust manager per site or multiple. Mr. Cleveland responded that the measure is to require one dust manager on a construction sites 50 acres and greater. Ms. Arthur mentioned measure 59, dust control manager required at construction and soil and rock excavation sites of five or more acres in Area A (current threshold for earthmoving permits), A.R.S. 49-459 (ADEQ). She stated that measures four and 59 are similar.

Mr. Hyde stated that measure 59 would require two days of training per year for certification of a dust manager. He indicated that the dust manager could do other jobs on the site. Mr. Hyde discussed the potential of PM-10 reductions from measure 59. Beverly Chenausky, Arizona Department of Transportation, asked if the measures are identical except for the acreage. Ms. Arthur responded that measure 59 also applies to soil and rock excavation sites so it applies to Rules 310 and 316. Ms. Crumbaker indicated that Rule 316 already requires a dust manager on-site. Mr. Kamps asked if the measure would require a person in a supervisory capacity on-site actively controlling dust and trained in dust control. Mr. Hyde replied that is correct.

Ms. McGennis expressed concern about the two day training requirement. She indicated that some training programs have already been developed that are not two days in length, but are very extensive. Mr. Bowers asked if the measure could be modified to require an intense training that may not be two days in length. Mr. Hyde replied that the two day requirement is from Clark County and that the nature of the training program and dust certification program can be decided later. Mr. Bowers mentioned integrating measures four and 59 to consist of an intense training program and a dust manager that can hold other jobs on-site that are not necessarily supervisory. Mr. Kamps stated that sources regulated under Rule 310 would like the dust managers to receive a 30-minute notification before inspections as is adopted in Rule 316.

Mr. Bowers made a motion to integrate measures four and 59 requiring sites 50 acres or more to have an intense training program and a dust manager that can hold other jobs on-site that are not necessarily supervisory with notice given of inspections. The motion was seconded by Ms. Knight.

Mr. Kamps stated that the measure indicates that larger sites are out of compliance. He mentioned that he believes smaller sites are more out of compliance with Rule 310. Mr. Cleveland asked if Mr. Kamps would like the measure to address all sites regardless of acreage. Mr. Kamps responded that there is already a measure to educate. He inquired about the difference between education on dust control and measures four and 59. Mr. Cleveland responded that measures four and 59 assign the dust control issues of a site to a particular person.

Ms. McGennis referred to measure two that references the Clark County Program, which requires a project manager be certified from a three to four hour program. She suggested seeing if that program works before requiring dust managers.

Mr. Bowers commented on changing the measures to have no acreage limit. Mr. Hyde stated that there is a one-tenth acre limit, anything above requires an earthmoving permit. Mr. Bowers asked that if this measure and nighttime inspections were approved, would the dust manager be required to work at night. Ms. Crumbaker replied that the dust manager would need to be on-site when there is nighttime activity on-site. Mr. Bowers stated that they have been pushing for a trade certification program to place the responsibility on the one making the dust. If that person takes part in the program, they can then be held responsible.

Ms. Chenausky asked how combining measures would impact the five percent reductions. Ms. Arthur replied that the exact percent compliance increase for each measure has not been defined. Ms. Chenausky commented on packaging the measures. Ms. Arthur replied that there does not appear to be any issue with packaging the measures. Mr. DeLaCruz commented that he came prepared to vote on the measures and now some of the measures are being redefined.

Ms. Knight stated that the difference between measures four and 59 is that 59 has a acreage requirement of five acres or more and does not require a dedicated dust manager. Mr. Bowers indicated that the motion makes this a residential measure instead of a commercial measure. Mr. Bowers withdrew his motion. Ms. Knight made a motion to approve measure four as written.

Mr. Cleveland indicated that measure 59 would address the commercial sites mentioned by Mr. Bowers. He indicated that Maricopa County is the implementing entity for measure four. Ms. McGennis stated that Maricopa County would be responsible for two training programs. Mr. Cleveland commented on the implementing entities determining if it makes sense to merge the programs. Ms. McGennis stated that Clark County has two separate programs: one for those operating the machinery and one for someone to be on-site overseeing the site. Jim Weiss, City of Chandler, seconded the motion to approve measure four as written. Mr. Kamps commented that the tonnage for this measure should be calculated so that it only applies to large residential projects. He stated that residential projects are only 4,000 tons and there will be negligible benefits. Mr. Cleveland discussed the process for recommending measures. Mr. Berry commented that the recommendations are preliminary at this time and there remains opportunity to make adjustments based on the final 2005 inventory. The motion passed with Ms. McGennis, Mr. Kamps, Mr. Bowers, Ms. Fish, and Mr. Berry voting no and Mr. O'Donnell, Mark Hajduk, Arizona Public Service Company, and Wienke Tax, Environmental Protection Agency, abstaining.

Mr. Person made a motion to recommend measures 1, 2, 5, 8, 9, and 18 with measure 3 being merged with measure 2. Ms. Knight seconded the motion. The motion passed with Ms. Fish voting no on measure nine and Ms. Tax abstaining.

Mr. Cleveland asked for a motion to indicate that the recommendations are preliminary and the measures may be amended based upon the impacts of the final 2005 inventory. Mr. Bowers moved and Mr. Berry seconded the motion. Ms. Knight commented on having to go through the process again if the measures are listed as preliminary. The motion passed with Ms. Tax abstaining.

Ms. Arthur asked that the Committee revisit measure 59. Mr. Person suggested that the Committee not consider any of the additional measures in Table 4 until the March 6, 2007 meeting. He stated that this is the first time he has seen the measures. Ms. Arthur stated that most of the measures in Table 4 are related to measures in Table 1. The Committee may need to revisit many measures in Table 1 once the measures in Table 4 are considered. Mr. Person indicated that many of the measures in Table 4 are redundant, but need to be studied further. Mr. Person moved that the Committee examine and vote on the additional measures in Table 4 at the March 6, 2007 meeting. Mr. O'Donnell seconded the motion. Mr. Cleveland asked if the Committee should wait to act on the measures in Table 1 that are related to additional measures in Table 4. Ms. Arthur suggested that the Committee proceed with Table 1. The motion passed with Ms. Tax abstaining.

Mr. Cleveland asked for comments on measure six, strengthen the stringency and enforcement of the trackout provisions. Mr. Kamps commented that he believes the intent of the measure right now is to have a 25 feet cumulative trackout provision. He questioned the benefit of the measure for permitted sources. Mr. Kamps stated another issue is whether nonpermitted sources should have a trackout requirement and should it be enforced against them. He indicated that 25 cumulative feet is an unattainable standard and the cost of it would be out of sight. Mr. Kamps added that Clark County has not focused on trackout.

Mr. Cleveland inquired about the benefits. Ms. Arthur replied that measure six has a large impact at the monitors and on the modeling demonstration. She added that the impact is due to the increase in enforcement for sources of trackout and dragout. Ms. Arthur stated that stringency could be removed from the measure title.

Ms. Person commented that measure six should apply to permitted and nonpermitted sources which is addressed in measure 56. He moved to approve measure six as written. Mr. Cleveland inquired about the points made by Mr. Kamps. Mr. Person stated that he agrees with Mr. Kamps in that all trackout should be addressed. He stated that this measure addressed trackout from permitted sources and measure 56 will address nonpermitted sources.

Ms. McGennis asked if the motion would decrease the trackout length. Ms. Arthur responded that reducing trackout length is listed as an example. Mr. Kamps asked if the benefit is for permitted or nonpermitted sources. He indicated that there is already a trackout requirement of 50 cumulative feet. Mr. Kamps stated that it is a violation without emissions. He mentioned interpretation issues. Ms. Arthur indicated that the benefit is based on the total trackout in the draft 2005 inventory and is not specific to source. Mr. Kamps stated that the measure presumes something is wrong with the standard on permitted sources. He indicated that the goal is to reduce emissions and he questioned if the measure gets us there.

Mr. Hyde indicated that he cannot see how the Committee could support a measure that costs \$2.5 million per ton. Bob Dulla, Sierra Research, stated that the cost is from sweeping multiple times per day. The approach was to increase the amount of sweeping and the benefit of going from 50 to 25 cumulative feet in terms of absolute amount is not that large, relative to the cost of sweeping more frequently.

Mr. O'Donnell commented that regardless of the size of the site, the trackout requirement is constant. He indicated that the measure may not be written correctly. Ms. Knight indicated that there is an existing requirement of 50 cumulative feet that cannot be weakened. She stated that measure 56 addresses nonpermitted sources. Ms. Arthur replied that the effectiveness is for sources of trackout and dragout. She mentioned that the measure would be helpful in attaining the standard. Ms. Knight commented on merging measures and suggested changing measure six to reflect nonpermitted sources and remove measure 56.

Ms. Sprungl commented on the high cost effectiveness. She asked how nonpermitted sources would be monitored other than to place the responsibility on the local governments. Ms. Sprungl mentioned the difficulty of tying trackout to a specific owner. Mr. Berry moved to vote on measure six as written. Mr. Kamps seconded the motion. The measure failed with Ms. Crumbaker and Ms. Tax abstaining.

Ms. McGennis commented that the measure descriptions are vague. Ms. Knight suggested that the Committee limit the discussion to clarifying questions. Ms. Sprungl stated that she would like to provide comments from SRP on the measures. Mr. Kamps indicated that issues are raised as the measures are being discussed.

Mr. Cleveland asked for comments on measure seven, increase fines for dust control violations and continue to publish the list of violators. Ms. Fish moved to vote on measure seven. She suggested the Committee vote no. Ms. McGennis seconded the motion. The measure failed with Mannie Carpenter, Valley Forward; Ed Stillings, Federal Highway Administration; Duane Yantorno, Arizona Department of Weights and Measures; Ms. Tax; and Ms. Crumbaker abstaining.

Mr. Cleveland asked for comments on measure ten, conduct just-in-time grading (i.e., once a parcel of land is cleared, stabilization or work on the parcel would be required within a certain number of days). Mr. Kamps expressed concern that the cost effectiveness is unknown and the real cost to homebuilders is significant. He added that stabilization is required when grading. Mr. Cleveland asked if there is a current acreage limit in Rule 310. Mr. Kamps replied that the limit is one-tenth acre. Mr. Cleveland inquired about 10 acres or more being required to comply with the measure. Mr. Kamps indicated that the measure provides no benefit since they are already required to stabilize.

Mr. Person commented that stabilizing is already required and he is not in favor of the measure. He moved to vote on measure ten. Ms. Fish seconded the motion. Mr. Hyde indicated that this kind of measure can really reduce windblown emissions. The measure failed with Mr. Hyde voting yes and Ms. Tax and Ms. Crumbaker abstaining.

Mr. Cleveland asked for comments on measure eleven, establish self-monitoring requirements for permitted sources larger than 50 acres. Ms. McGennis asked if the measure would require a monitor on-site and inquired about the cost. Ms. Arthur responded that is correct and the purchase price of a monitor is approximately \$3,500. Mr. Dulla indicated that a lease cost would be less. He stated that typically, sites would install more than one monitor to compare the difference between upwind and downwind emissions.

Ms. Sprungl inquired about the additional benefit of self-monitoring versus having dust managers on-site. Mr. Dulla replied that there would be real, verifiable information. Mr. Bouchie commented that Table 1 indicates this measure would have a large impact on the Salt River Area and inquired about the permitted sources that would be affected. Mr. Cleveland stated that the measure would

impact permitted sources greater than 50 acres. Ms. Knight stated that the MAG consultant did not indicate construction as a problem in the Salt River Area. She mentioned the Higley monitor. Mr. Dulla mentioned that within the Salt River Area, the impact of the measure would be on existing rock and aggregate facilities. At the Higley monitor, it would be a construction site. Mr. Kamps stated that the measure would only impact residential construction because of the 50 acre requirement. Mr. Dulla stated that the measure could be generalized to impact any type of construction, such as highway construction. Mr. Kamps stated that the measure would place a significant cost to a narrow sector of the industry just to gather data. It would not reduce emissions. Mr. Bouchie indicated that at the time the Higley monitor was violating, there was a highway construction project nearby.

Mr. Bowers commented that the data collected at the on-site monitors would be available pursuant to a lawsuit. Mr. Dulla indicated that self-monitoring is done in California on a power plant site that has a dust control plan in place. He stated that the number of days where controls were implemented due to this measure was relatively small. Ms. Crumbaker asked if the measure was modeled after the provision in South Coast Rule 403. Mr. Dulla replied that is correct. Ms. Crumbaker indicated that in South Coast 403, self-monitoring is an option to replace some of the other requirements for construction sites. Mr. Dulla stated that the goal of the measure is instrumentation.

Mr. Kamps asked how many companies provide the monitors in the Maricopa County area. Mr. Dulla replied that DustTrack monitors are generally available and can be leased, but he would assume there are few companies selling them in Maricopa County.

Mr. Berry commented that the monitor data could be used as evidence the site is not violating. He stated that if the monitors were recording no violations then some of the other requirements may not be necessary. He mentioned giving the sources options. Mr. Carpenter commented that monitor data is one point and that visible emissions are more flexible and indicate a problem readily. Ms. Knight moved to vote on measure eleven. Ms. Fish seconded the motion. The measure failed with Mr. Cleveland voting yes and Ms. Tax and Ms. Crumbaker abstaining.

Mr. Cleveland asked for comments on measure twelve, conduct mobile monitoring to measure PM-10 and issue NOVs. Ms. Knight moved to vote on the motion with recognition that Maricopa County is already pursuing mobile monitoring. Mr. Person seconded the motion. Ms. McGennis asked if the measure would impact permitted or nonpermitted sources. She indicated that the benefits are from nonpermitted sources. Ms. Crumbaker replied that the mobile monitoring vehicle would likely address more permitted than nonpermitted sources. She added that the vehicle would not be designed for PM-10 only. Ms. Arthur stated that the measure would result in PM-10 reductions of 94 tons per one percent increase in compliance with dust control rules by nonpermitted sources. She indicated that there is a lot of room for improvement in compliance with nonpermitted sources. Ms. Knight asked if the benefits from permitted sources could be added. Mr. Cleveland replied that is correct. Ms. McGennis suggested that the measure indicate both permitted and nonpermitted sources would be impacted. Ms. Knight and Mr. Person agreed to amend the motion. The measure passed with Ms. Fish voting no and Ms. Tax abstaining.

Mr. Cleveland asked for comments on measure 13, cease dust generation activities during stagnant conditions. Mr. Kamps indicated that due to the measure being only for permitted sources and cost effectiveness, he recommends voting no on the measure. He moved to vote on the measure. The motion was seconded by Ms. Knight. Mr. Cleveland asked if Mr. Kamps would like to expand the measure to all sources. Mr. Kamps replied that the measure is unattainable.

Mr. Hyde indicated that measure 13 is one of a few measures that could really make a difference in improving air quality. He mentioned the potential of the measure. Mr. Carpenter commented that rather than ceasing operations, there could possibly be a list of supplemental actions developed that could be implemented on high PM days. Mr. Bowers commented that he is unable to discuss the measure due to antitrust reasons.

Ms. Knight inquired about how the message would reach those in the field. She mentioned the High Pollution Advisory Program. Ms. Knight asked about enforcement. Diane Arnst, Arizona Department of Environmental Quality, commented that there is a three day advance dust advisory in Yuma, Arizona. Ms. Crumbaker indicated that there are also three day advance dust notices in Maricopa County; however, some of the High Pollution Advisory days are called in a shorter period of time. Ms. McGennis commented that they are already regulated under Rule 310.

Merry Ellen Boom, Converse Consultants, indicated that a more efficient way to issue a cease work order would be to have an inspector go to the site when the emissions are occurring. She stated that the cease work order would be lifted once the site is in compliance. Ms. Boom stated that those working in the field will not get the message regardless of the lead time. She indicated that there are entities that are not part of an association that would not get the message about High Pollution Advisory days or other issues.

Mr. Cleveland indicated that some of the strategies could be combined to enhance the self-policing efforts. Mr. Person asked if the measure would apply to all construction sites. Mr. Kamps replied that the measure addresses permitted sources (Rules 310 and 316), construction and sand and gravel predominately. Mr. Cleveland called for the vote on measure 13. The measure failed with Mr. Woods, Mr. Hyde, Mr. Yantorno, and Larry Crisafulli, Citizen Representative, voting yes and Ms. Tax and Ms. Crumbaker abstaining.

Mr. Cleveland asked for comments on measure 14, establish maintenance requirements for paved roads and parking lots. Ms. Knight expressed concern with the assumption of sweeping every parking lot every two weeks. Ms. Arthur stated that assumption was used only to calculate cost effectiveness. Mr. Dulla indicated that many parking lots are being swept every night to collect garbage and are not focused on reducing silt loadings. He stated that the target is facilities that are adjacent to unpaved facilities that have a lot of trackout. Ms. Knight inquired about implementation. She mentioned measure 56.

Mr. Cleveland asked if the equipment being used is better than leaf blowers. Mr. Dulla stated that the equipment is just picking up garbage. Mr. Cleveland commented on upgrading equipment. Mr. Dulla discussed the considerable cost of upgrading equipment. He stated that the measure was based on the field study where he observed vehicles coming from paved lots that were not maintained. Mr. Kukino made a motion to vote on measure 14. Mr. Weiss seconded the motion. The measure failed with Ms. Tax and Ms. Crumbaker abstaining.

Mr. Cleveland asked for comments on measure 15, conduct nighttime inspections. Ms. McGennis made a motion to vote on measure 15. The measure was seconded by Mr. DeLaCruz. The measure passed with Mr. Kamps, Ms. McGennis, Mr. Berry, Mr. Bowers, and Mr. Yantorno voting no and Ms. Tax abstaining. Mr. Kamps asked if the inspections would be just on active sites. Ms. Arthur replied that the measure is the result of early morning activity observed in the Salt River Area starting around 4:00 a.m. and the accumulation of PM-10 through 9:00 a.m. The measure gets

inspectors out during that time to make sure sites are in compliance. She stated that the inspections would occur only during activity.

Mr. Cleveland asked for comments on measure 16, increase inspection frequency for permitted facilities. Mr. Hajduk moved to vote on the measure. Mr. Bouchie seconded the motion. Mr. Kamps commented that specific inspections are already required on permitted facilities. He inquired about why the measure is on the list. Ms. Arthur replied that the objective of the measure is to increase compliance.

Ms. Boom indicated that five inspections per year are required on sites greater than ten acres. She suggested proactive inspections of construction sites to make sure they are in compliance from the beginning and at that point issue the permit. Ms. Boom stated that sites less than ten acres required one inspection per year.

Mr. Kamps commented on Maricopa County providing education inspections instead of enforcement inspections early in the earthmoving permit approval process. Mr. Cleveland indicated that measure 17 addresses proactive inspections. Measure 16 passed with Mr. Kamps, Ms. Fish, Mr. Bowers, and Ms. McGennis voting no and Ms. Tax abstaining.

Mr. Cleveland asked for comments on measure 17, increase number of proactive inspections in areas of highest PM-10 emissions densities. Mr. Kamps made a motion to vote on measure 17. The motion was seconded by Mr. Bowers. The measure passed with Ms. Tax abstaining.

Mr. Cleveland indicated that measures 19 through 74 will be discussed at the March 6, 2007 meeting. Ms. Knight referred to the additional measures in Table 4. She stated that many of the measures are related to measures in Table 1. Ms. Knight recommended amending the measures in Table 1 instead of adding 28 more measures.

Mr. Person commented that vagueness in the measure descriptions provide municipalities with latitude to make commitments. He mentioned the status report on agricultural measures.

6. Status Report on Agricultural Measures

This agenda item was postponed until a future meeting.

7. Call for Future Agenda Items

Mr. Cleveland announced that the next meeting of the Committee is tentatively scheduled for March 6, 2007 to complete the recommendation of a Suggested List of Measures to Reduce PM-10 Particulate Matter. With no further comments, the meeting was adjourned.